

REMARKS

This Replacement Preliminary Amendment is submitted for entry into the file of Reissue Application No. 10/669,121 and replaces the entire Preliminary Amendment submitted with the Reissue Application filed on September 23, 2003. The Replacement Preliminary Amendment is necessary because a Certificate of Correction was issued on July 20, 2004, which is after the Reissue Application and initial Preliminary Amendment were filed.

Reissue Application No. 10/669,121 should be based, therefore, on U.S. Patent 6,308,531 B1 as corrected by the Certificate of Correction issued on July 20, 2004 and as amended by the Replacement Preliminary Amendment submitted herewith.

The Specification has been amended so that the descriptive matter in the section entitled "BRIEF SUMMARY OF THE INVENTION" is in harmony with the claims as amended (MPEP 1302.01). The Abstract also has been amended to be in harmony with the claimed invention.

This Replacement Preliminary Amendment (a) corrects some previously unrecognized minor antecedent errors in Claims 1-8, (b) corrects some previously unrecognized typographical errors in the Specification, (c) adds new claims 9-20 and identifies support for these claims in the Specification and Drawings, and (d) presents replacement sections entitled "Brief Summary of the Invention" and "Abstract" to be in harmony with the amended claims per MPEP 1302.01.

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Support for new Claims 9-20 is summarized below.

Claim 9: Support is found at column 8, line 45 to column 9, line 27 and in Fig. 1, particularly heat exchanger 150. Additional support found in Fig. 2 (250), Fig. 3 (150), Fig. 4 (150), Fig. 5 (150), Fig. 7, Fig. 8 (150), and Fig. 9 (150). It is seen that at least a portion of the pressurized gaseous refrigerant (162, 510) is cooled in a heat exchanger (150, 250) that does not cool the feed gas.

Claim 10: Support is found at column 8, line 45 to column 9, line 27 and in Fig. 1, particularly heat exchanger 150. Additional support found in Fig. 3 (150), Fig. 4 (150), Fig. 5 (150), Fig. 8 (150), and Fig. 9 (150). It is seen that all of the pressurized gaseous refrigerant (162, 510) is cooled in a heat exchanger (150, 250) that does not cool the feed gas.

Claim 11: Support is found in Fig. 2 (262, 206, 222, 202) and at column 9, lines 41-45.

Claim 12: Support is found at column 6, lines 30-34 and at column 8, lines 45-47.

Claim 13: Support is found at column 6, lines 30-34; column 8, line 45 to column 9, line 27; column 9, line 64 to column 10, line 9; Fig. 1; and Fig. 4.

Claim 14: Support is found at column 9, lines 6-27 and in Fig. 1.

Claim 15: Support is found at column 7, lines 51-55.

Claim 16: Support is found at column 8, line 45 to column 9, line 27 and in Fig. 1, particularly heat exchanger 150. Additional support found in Fig. 2 (250), Fig. 3 (150), Fig. 4 (150), Fig. 5 (150), Fig. 7, Fig. 8 (150), and Fig. 9 (150). It is seen that at least a portion of the pressurized gaseous refrigerant (162, 510) is cooled in a heat exchanger (150, 250) that does not cool the feed gas.

Claim 17: Support is found at column 8, line 45 to column 9, line 27 and in Fig. 1, particularly heat exchanger 150. Additional support found in Fig. 3 (150), Fig. 4 (150), Fig. 5 (150), Fig. 8 (150), and Fig. 9 (150). It is seen that all of the pressurized gaseous refrigerant (162, 510) is cooled in a heat exchanger (150, 250) that does not cool the feed gas.

Claim 18: This claim recites apparatus for the first refrigeration system and is supported at column 8, line 45 to column 9, line 5, and Fig. 1.

Claim 19: Support is found at column 9, lines 6-27 and in Fig. 1 (130, 150).

Claim 20: Support is found at column 7, lines 51-55.

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Replacement Preliminary Amendment for Reissue Application No. 10/669,121

As recited in their Declaration filed with the Reissue Application, the inventors believe the original patent to be wholly or partly inoperative or invalid for two reasons: (1) by reason of claiming more or less than they had the right to claim in the patent and (2) by reason of other errors. A brief explanation of these reasons is presented again below for the Examiner's information.

(1) The inventors believe they claimed less than they had the right to claim in the original patent, and new method claims therefore have been added for previously unclaimed embodiments of the invention. In addition, new apparatus claims have been added to claim previously unclaimed subject matter. As required by 37 C.F.R. 1.173 (c), information submitted above and in the Status of Claims and Support for Claim Changes filed with the Reissue Application indicates support in the original specification for the new claims submitted above.

(2) The reissue application also corrects other errors in the issued patent and Certificate of Correction as presented above.

Timely examination of this reissue application is requested.

Respectfully submitted,



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